UNITED STATES PATENT AND TRADEMARK OFFICE

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MERCHANT & GOULD	
SCIENTIFIC ATLANTA, A CISCO COMPANY	
P.O. BOX 2903	
MINNEAPOLIS, MN 55402-0903	

EXAMINER
AN, SHAWN S

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte ARTURO A. RODRIGUEZ, PETER CHAN,
AJITH NAIR, RAMESH NALLUR, and SHASHI GOEL

_____

Appeal 2011-009069
Application 09/736,661[1]
Technology Center 2400

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Before CAROLYN D. THOMAS, JAMES R. HUGHES, and
GREGORY J. GONSALVES, *Administrative Patent Judges*.

THOMAS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134 of the Examiner's final decision rejecting claims 38, 53-55, 71-78, 80-82, and 85-89, which are all the claims remaining in the application. Claims 1-37, 39-52, 56-70, 79, 83, and 84 are cancelled. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We REVERSE.

The present invention relates generally to decoding of compressed digital video under constrained resources. *See* Spec. 1:11.

Claim 38 is illustrative:

> 38.   A method for adapting to resource constraints of a digital home communication terminal (DHCT), said method comprising steps of:
>
> determining by the DHCT whether one of a resource-constrained mode or a non-resource constrained mode is to be initiated, the DHCT capable of operating in the non-resource constrained mode and a plurality of resource constrained modes;
>
> responsive to determining that one of the resource-constrained modes is to be initiated, operating the DHCT in the determined resource-constrained mode, including:
>
> retrieving a set of reconstructed decompressed video frames from a first portion of a memory component, wherein the memory component stores compressed video frames in a distinct second portion, wherein the set of video frames corresponds to a video picture stored in the first portion; and
>
> transferring the set of retrieved reconstructed decompressed video frames to a display device while downscaling the video picture in transit to the display device.

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Appellants appeal the following rejection:

Claims 38, 53-55, 71-78, 80-82, and 85-89 are rejected under 35 U.S.C. § 103(a) as being unpatentable over MacInnis (US 6,570,579 B1, May 27, 2003), Boyce (US 5,614,952, Mar. 25, 1997), and Kalra (US 5,953,506, Sep. 14, 1999).

ANALYSIS

Our representative claim, claim 38, recites, *inter alia*, *"transferring the set of retrieved . . . video frames to a display device while downscaling the video picture in transit to the display device"* (emphasis added). Independent claims 53-55 and 89 recite commensurate limitations. Thus, the scope of each of the independent claims includes transferring the set of retrieved video frames while downscaling the video picture in transit.

Issue: Did the Examiner err in finding that the combined cited art, particularly *Boyce*, teaches and/or suggests "transferring . . . video frames to a display device while downscaling the video picture in transit to the display device," as claimed?

Based upon our review of the record, we find the weight of the evidence supports Appellants' position as articulated in the Briefs.

Appellants contend that "'downscaling' [in MacInnis] occurs prior to capture, not post-capture as described in association with claim 38" (App. Br. 9 (emphasis omitted)). Appellants further contend that "the scaling operation in Appellant's claimed embodiment is implemented downstream

of the media memory, unlike that shown in Figure 2 of *MacInnis*." (App. Br. 11.) Appellants also contend that "*Boyce*, like *MacInnis* and *Kalra*, fails to describe downscaling after the decompressed picture buffer." (App. Br. 12.) We agree with Appellants.

Here, the Examiner starts off by conceding that MacInnis does not disclose transferring video frames *while* downscaling the video picture in transit to the display device (Ans. 4). However, the Examiner thereafter found that "MacInnis et al clearly discloses downscaling occurring after the decompressed video frames/pictures" (Ans. 11). The Examiner also found that "Boyce et al clearly teaches/illustrates downscaling (126) occurring after the decoded/decompressed picture buffer (202)" (*id.* (emphases omitted)). We disagree.

As for MacInnis, we find that while MacInnis discloses that a "video scaler 52 may perform both downscaling and upscaling" (MacInnis, col. 5, ll. 65-66), MacInnis expressly discloses that "the video scaler preferably downscales before capturing video frames to memory" (MacInnis, col. 6, ll. 6-7). In other words, MacInnis downscales the video frames prior to storing the frames in memory.

Contrary to MacInnis, in the claimed invention, a set of reconstructed decompressed video frames is retrieved from a memory component, and the set of retrieved from memory decompressed video frames is transferred to a display device while downscaling the video picture in transit to the display device (*see* claim 38). In other words, in the claimed invention the video frames are downscaled during transmission to the display device, i.e., after being retrieved from the memory component, not prior to loading into the memory component.

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Similar to MacInnis, Boyce discloses that "[t]he received downsampled, decompressed video frames are stored in the frame memory 118" (Boyce, col. 10, ll. 44-45). Stated differently, like MacInnis, Boyce also downscales the video frames prior to storing them in the frame memory.

Here, we have an invention that requires retrieving a set of video frames from a memory component and transferring that set of retrieved video frames to a display device while downscaling the video picture in transit (*see* claim 38). Thus, the downscaling is performed after the data is retrieved from memory and during transit. The Examiner has not established, and we cannot find, where either cited art, i.e., MacInnis, Boyce, or Kalra, discloses downscaling video frames *after* retrieving them from memory and *during* transit to the display device, as required by claim 38.

Thus, based on the record before us, and for the reasons set forth with respect to claim 38, we find that the Examiner erred in finding that the combined teachings of MacInnis, Boyce, and Kalra discloses each limitation recited in Appellants' claims. Accordingly, we reverse the Examiner's obviousness rejection of claims 38, 53-55, 71-78, 80-82, and 85-89.

Since we agree with at least one of the arguments advanced by Appellants, we need not reach the merits of Appellants' other arguments. It follows that Appellants have shown that the Examiner erred in finding that the combined teachings of MacInnis, Boyce, and Kalra renders claims 38, 53-55, 71-78, 80-82, and 85-89 unpatentable.

DECISION

We reverse the Examiner's § 103 rejection.

REVERSED

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